Claims

1. A setting and curing accelerator for hydraulic binders, comprising:
$Al_2(SO_4)_3$ aluminum sulfate, $Al(OH)_3$ aluminum hydroxide and mineral acid in aqueous solution.

2. The setting and curing accelerator as claimed in claim 1,
characterized in that (in % by weight) the proportion of aluminum sulfate is 10-50% and/or the proportion of aluminum hydroxide is 5-30% and/or the proportion of mineral acid is 0.5-10%.

3. The setting and curing accelerator as claimed in claim 1 or 2,
characterized in that (in % by weight) the proportion of aluminum sulfate is 30-50% and/or the proportion of aluminum hydroxide is 5-20%.

4. The setting and curing accelerator as claimed in claim 1, 2 or 3,
characterized in that (in % by weight) the proportion of aluminum sulfate is 40-45% and/or the proportion of aluminum hydroxide is 10-17% and/or the proportion of mineral acid is 0.5-8%.

5. The setting and curing accelerator as claimed in any of the preceding claims,
characterized in that the mineral acid present comprises (in % by weight) 1-5% of H_3PO_4 phosphoric acid and/or 0.5-3.0% of H_3BO_3 boric acid.

6. The setting and curing accelerator as claimed in any of the preceding claims,
characterized in that (in % by weight) 0-10% of alkanolamine and/or 0-5.0% of fluidizer and/or 0-20% of stabilizer are present.

7. The setting and curing accelerator as claimed in any of the preceding claims,
characterized in that (in % by weight) 0-5% of alkanolamine and/or 0-10% of stabilizer and/or 0-3.0% of fluidizer are present.

8. The setting and curing accelerator as claimed in claim 6 or 7,
characterized in that the alkanolamine is a diethanolamine.

9. The setting and curing accelerator as claimed in claim 6 or 7,
characterized in that the stabilizer is a silica sol.

10. The setting and curing accelerator as claimed in claim 6 or 7,
characterized in that the fluidizer is a polycarboxylate.

11. A process for producing a setting and curing accelerator,
characterized in that a setting and curing accelerator as claimed in any of claims 1 to 10 which is present in aqueous solution is dried, in particular by a spray drying process.

12. The process for producing a setting and curing accelerator as claimed in claim 11,
characterized in that the dried mixture obtained is dissolved in water before addition to the hydraulic binder.

13. A process for producing a setting and curing accelerator as claimed in any of claims 1 to 10,
characterized in that in the production of the aqueous solution and the addition of the

components in the production of the solution, the solution is heated in a range from room temperature to 90°C.

14. The process for producing a setting and curing accelerator as claimed in claim 13, characterized in that the solution is heated to 50-80°C.

15. A method of accelerating the setting and curing of hydraulic binders and also mortar or concrete produced therefrom, characterized in that a setting and curing accelerator as claimed in any of claims 1 to 12 is added in an amount of from 0.1 to 10% by weight to a mixture comprising hydraulic binders, with the percentages by weight being based on the weight of the hydraulic binder.

16. The use of the setting and curing accelerator as claimed in any of claims 1 to 12 in a spray concrete or spray mortar.